



# 2018-19 School and Child Care Audit Report

Bureau of Immunization and TB  
Division of Acute Disease Prevention, Emergency Response, and  
Environmental Health (ADPER and EH)  
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**Iowa Department of Public Health**  
Protecting and Improving the Health of Iowans



## Acknowledgements

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## Executive Summary

Each year, the Iowa Department of Public Health Immunization Program releases school and child care immunization audit reports. Local Public Health Agencies conduct audits of immunization records for students enrolled in licensed child care centers and public, private and parochial students in kindergarten through 12<sup>th</sup> grade each year. Assessments are conducted to ensure attendees receive the required immunizations and have a valid Iowa Department of Public Health Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization.

## Child Care Audit Highlights

During the 2018-19 school year:

### Immunization Certificates

- 96.8% of children attending licensed child care centers had valid immunization certificates, indicating 94,136 children had IDPH Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization in compliance with Iowa law.
  - The number of children in child care with valid immunization certificates increased 5.2% from the previous assessment year.

### Certificates of Immunization

- 93.9% of children attending licensed child care centers had valid Certificates of Immunization, indicating 91,354 children met age-appropriate immunization requirements.
  - The number of children in child care with valid Certificates of Immunization increased 1.8% from the previous assessment year, and has increased since the 2011-12 assessment year.

### Provisional Certificates of Immunization

- 1.3% of children attending licensed child care centers had Provisional Certificates of Immunization, indicating 1,258 children received at least one dose of each of the required vaccines but did not complete all required immunizations.
  - The number of children in child care with Provisional Certificates of Immunization decreased 14.8% from the previous school year, and has decreased since the 2011-12 assessment year.

### Certificates of Medical Exemption

- 0.1% of children attending licensed child care centers had Certificates of Medical Exemption, representing 109 children.
  - The number of children in child care with valid Certificates of Medical Exemption increased 17.2% from the previous school year, but has decreased since the 2011-12 assessment year.

### Certificates of Religious Exemption

- 1.5% of children attending licensed child care centers had Certificates of Religious Exemption, representing 1,415 children.
  - The number of children in child care with valid Certificates of Religious Exemption increased 14.9% from the previous school year and has continued to increase since the 2011-12 assessment.

### **Invalid or No Immunization Certificates**

- 3.2% of children attending licensed child care centers had invalid or no immunization certificates, representing 3,156 children.
  - The number of children in child care with invalid or no immunization certificates decreased 13.8% from the previous school year, and has decreased since the 2016-17 school year.

### **Under or Un-immunized**

- 6.1% of children attending licensed child care centers were under or un-immunized, representing 5,938 children with a Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate.
  - The number of children in child care under and un-immunized decreased 8.1% from previous year, and has decreased since the 2011-12 school year.

## **School Audit Highlights**

During the 2018-19 school year:

### **Immunization Certificates**

- 98.9% of students attending Iowa schools had valid immunization certificates, indicating 519,996 records of IDPH Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization complied with Iowa law.
  - The number of students in Iowa schools with valid immunization certificates increased 1.0% from the previous school year.

### **Certificates of Immunization**

- 95.6% of students attending Iowa schools had valid Certificates of Immunization, indicating 502,286 records met age-appropriate immunization requirements.
  - The number of students in Iowa schools with valid Certificates of Immunization increased 0.9% from the previous school year.

### **Provisional Certificates of Immunization**

- 1.2% of students attending Iowa schools had Provisional Certificates of Immunization, indicating 6,136 students received at least one dose of each of the required vaccines but did not complete all required immunizations or have transferred from another U.S. school system.
  - The number of students in Iowa schools with Provisional Certificates of Immunization decreased 4.7% from the previous school year.

### **Certificates of Medical Exemption**

- 0.3% of students attending Iowa schools had Certificates of Medical Exemption, representing 1,723 students.
  - The number of students in Iowa schools with valid Certificates of Medical Exemption decreased 7.0% from the previous school year, and has decreased since the 2013-14 school year.

### **Certificates of Religious Exemption**

- 1.9% of students attending Iowa schools had Certificates of Religious Exemption, representing 9,851 students.
  - The number of students in Iowa schools with valid Certificates of Religious Exemption increased 12.7% from the previous school year, and has increased since the 2006-07 school year.

### **Invalid or No immunization Certificates**

- 1.1% of students attending Iowa schools had invalid or no immunization certificates, representing 5,519 students.
  - The number of students in Iowa schools with invalid or no immunization certificates decreased 10.0% from the previous school year.

### **Under or Un-immunized**

- 4.4% of students attending Iowa schools were under or un-immunized, representing 23,229 students with a Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate.
  - The number of under and un-immunized students in Iowa schools increased 0.3% from the previous year.

### **School audits by grade (Excluding homeschool students that may represent multiple grades):**

- Highest number and percentage of valid immunization certificates: 5<sup>th</sup> grade
- Highest number and percentage of Certificates of Immunization: 5<sup>th</sup> grade
- Highest number and percentage of Provisional Certificate of Immunization: 12<sup>th</sup> grade
- Highest number and percentage of Certificates of Medical Exemption: 9<sup>th</sup> grade
- Highest number and percentage of Certificates of Religious Exemption: Kindergarten
- Highest number and percentage of invalid or no certificates: 12<sup>th</sup> grade
- Highest number and percentage of under or un-immunized students: 12<sup>th</sup> grade

## Background

Annually, the Iowa Department of Public Health Immunization Program releases school and child care audit reports. Local Public Health Agencies (LPHAs) conduct audits of immunization records for children enrolled in licensed child care centers and public, private and parochial students in kindergarten through 12<sup>th</sup> grade each year. Assessments are conducted to ensure attendees receive the required immunizations and have a valid Iowa Department of Public Health Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization.

Iowa Code, Chapter 139a.8(6) and Iowa Administrative Code, 641-7.7(139) outline immunization requirements to attend licensed child care centers and elementary or secondary schools. To attend school or licensed child care, the child needs to present a valid Certificate of Immunization, Provisional Certificate of Immunization, or Certificate of Immunization Exemption (Medical or Religious) to the admitting official. A brief explanation of each certificate is included below.

- **Certificate of Immunization** - Issued when applicant has a record of age-appropriate immunizations that meet the requirement for licensed child care or school enrollment.
- **Provisional Certificate of Immunization** - Issued when the applicant has received at least one dose of each of the required vaccines but has not completed all required immunizations or is a transfer student from another U.S. school system.
- **Certificate of Immunization Exemption-Medical** - Iowa law allows for medical exemption to immunization when required immunizations would be injurious to the health and well-being of the applicant or any member of the applicant's family or household or required vaccine would violate minimum interval spacing.
- **Certificate of Immunization Exemption-Religious** - Iowa law allows for religious exemption to immunization when immunizations conflict with a genuine and sincere religious belief, and is not based merely on philosophical, scientific, moral, personal or medical opposition to immunizations.

Data files contained in this report are available on the Immunization Program webpage at <http://idph.iowa.gov/immtb/immunization/audits>. In 2018, the Immunization Program began to collaborate with the Iowa Public Health Tracking Program to include immunization data for childhood, adolescent, HPV, influenza and school and child care audits on the IDPH Tracking Portal. These data are currently available at <https://tracking.idph.iowa.gov/Health/Immunization>.

## Vaccination Coverage for Child Care

Local Public Health Agencies conducted audits of immunization records for children enrolled in Iowa's licensed child care centers during the 2018-2019 school year. Records from 97,292 enrolled students were analyzed to calculate statewide vaccination coverage levels.

- During the 2018-19 school year, 96.8% of children attending licensed child care centers had valid immunization certificates (94,136 records).
- The statewide coverage levels for all vaccinations required at child care entry was 93.9%, as indicated by valid Certificates of Immunizations (91,354 records).
- Invalid or no immunization certificates accounted for 3.2% (3,156 records) of children enrolled in child care (Figure 1 and Table 1).
- 6.1% of children enrolled in licensed child care were under or un-immunized (5,938 records) and included students with a Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate.

**Figure 1 Immunization Certificates by Type, Child Care, Iowa, 2011-12 to 2018-19**

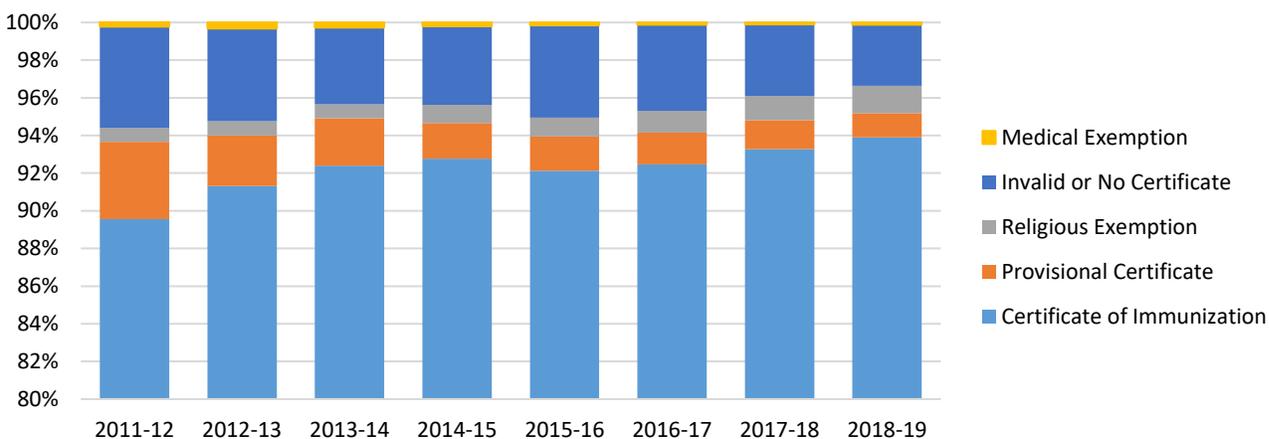


Figure Note: Vertical axis begins at 80%

**Table 1 State Immunization Summary by Year, Child Care, Iowa, 2011-12 to 2018-19**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2011-12	68,830	89.6	3,158	4.1	285	0.4	571	0.7	4,118	5.4	76,854	72,844	94.8
2012-13	75,983	91.3	2,235	2.7	269	0.3	636	0.8	4,089	4.9	83,212	79,123	95.1
2013-14	74,659	92.4	2,048	2.5	219	0.3	599	0.7	3,286	4.1	80,811	77,525	95.9
2014-15	79,415	92.8	1,631	1.9	169	0.2	826	1.0	3,576	4.2	85,617	82,041	95.8
2015-16	78,272	92.1	1,551	1.8	140	0.2	845	1.0	4,163	4.9	84,971	80,808	95.1
2016-17	86,048	92.5	1,561	1.7	112	0.1	1,067	1.2	4,266	4.6	93,054	88,788	95.4
2017-18	89,720	93.3	1,476	1.5	93	0.1	1,231	1.3	3,662	3.8	96,182	92,520	96.2
2018-19	91,354	93.9	1,258	1.3	109	0.1	1,415	1.5	3,156	3.2	97,292	94,136	96.8

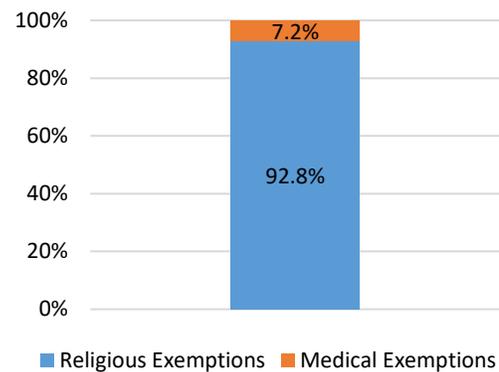
### Provisional Certificate of Immunization

- During the 2018-2019 school year, 1.3% of children in child care had a Provisional Certificate of Immunization, representing 1,258 children.
- The percent of children in child care with a Provisional Certificate of Immunization has declined since the 2011-12 school year, decreasing from 4.1% (3,158 children) during the 2011-12 school year to 1.3% (1,258 children) during the 2018-19 school year (Table 1 and Figure 1).
- For the 2018-19 school year, the number of Provisional Certificates of Immunization decreased 22.9% since the 2014-15 school year and by 14.8% from the previous year.

### Certificates of Immunization Exemption

- During the 2018-2019 school year, 1.6% of children in child care had a Certificate of Immunization Exemption (1,524 records).
- Of the 1,524 exemptions, 92.8% (1,415 records) were categorized as religious and 7.2% (109 records) were categorized as medical (Figure 2).

**Figure 2 Percentage of Exemptions by Type, Child Care, Iowa, 2018-19**



#### *Medical Exemptions:*

- During the 2018-2019 school year, 0.1% of children enrolled in licensed child care had a Certificate of Medical Exemption, representing 109 children.
- The number of Certificates of Medical Exemption declined each year between 2011 and 2018, and increased during the past school year (Table 1).
- The number of Certificates of Medical Exemption decreased by 35.5% (60 records) since the 2014-15 school year and increased by 17.2% (16 records) from the previous year.

#### *Religious Exemptions:*

- During the 2018-19 school year, 1.5% of children enrolled in licensed child care had a Certificate of Religious Exemption, representing 1,415 children.
- The number of Certificates of Religious Exemption has increased during the past seven years.
- The number of Certificates of Religious Exemptions increased by 71.3% (589 records) since 2014-15, and increased 14.9% (184 records) from the previous year.

### Under and Un-Immunized

- The number of under and un-immunized children has decreased since 2013-14 and includes children who have an invalid or no certificate, Provisional Certificate of Immunization, Certificate of Medical Exemption or Certificate of Religious Exemption (Table 2).
- During 2018-2019, 6.1% of children enrolled in licensed child care were under immunized, representing 5,938 children.

**Table 2 Under-Immunized Children in Child Care, Iowa, 2014-15 to 2018-19**

	2014-15	2015-16	2016-17	2017-18	2018-19
Certificate of Medical Exemption	169	140	112	93	109
Percent change in number of Medical Exemptions from previous year	-22.8%	-17.2%	-20.0%	-17.0%	17.2%
Certificate of Religious Exemption	826	845	1,067	1,231	1,415
Percent change in number of Religious Exemptions from previous year	37.9%	2.3%	26.3%	15.4%	14.9%
Provisional Certificate	1,631	1,551	1,561	1,476	1,258
Percent change in number of Provisional Exemptions from previous year	-20.4%	-4.9%	0.6%	-5.4%	-14.8%
Invalid or No Certificate	3,576	4,163	4,266	3,662	3,156
Percent change in number of Invalid or No Certificate from previous year	8.8%	16.4%	2.5%	-14.2%	-13.8%
Total Under/Un-immunized	6,202	6,699	7,006	6,462	5,938
Percent of Under/Un-immunized Students	7.2%	7.9%	7.5%	6.7%	6.1%
Percent change in number of Under/ Un-immunized from previous year	0.8%	8.0%	4.6%	-7.8%	-8.1%

## Vaccination Coverage for Public, Private and Parochial Schools

Local Public Health Agencies conducted audits of immunization records for children enrolled in kindergarten at Iowa public, private and parochial schools during the 2018-2019 school year. Records from 525,515 enrolled students in 1,585 Iowa schools were analyzed to calculate statewide vaccination coverage levels.

### Vaccination Coverage of Students Kindergarten through 12<sup>th</sup> Grade

- During the 2018-19 school year, 98.9% of students in kindergarten through 12<sup>th</sup> grade had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law, representing 519,996 students.
- The statewide coverage level for all vaccinations required for school was 95.6%, as indicated by valid Certificates of Immunizations, representing 502,286 students.
- Students without a Certificate of Immunization, Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate accounted for 1.1% of students enrolled in Kindergarten through 12<sup>th</sup> grade, representing 5,519 students (Figure 3 and Table 3).

**Figure 3 Immunization Certificates by Type, Kindergarten -12th Grade, Iowa, 2006-07 to 2018-19**

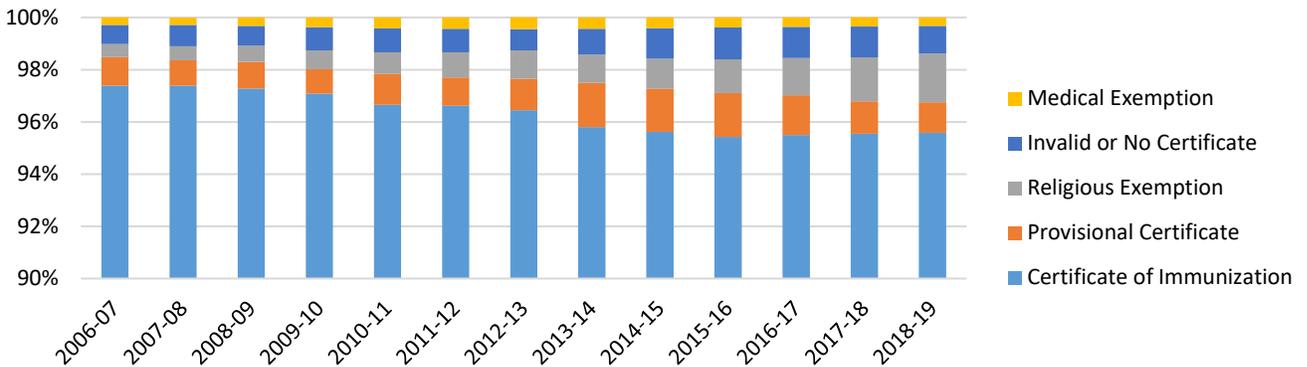


Figure Note: Vertical axis begins at 90%

**Table 3 State Immunization Summary by Year, Kindergarten - 12th Grade, Iowa, 2006-07 to 2018-19**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Total	%	Total	%	Total	%		Total	%
2006-07	496,646	97.4	5,543	1.1	1,461	0.3	2,572	0.5	3,733	0.7	509,955	506,222	99.3
2007-08	498,918	97.4	5,045	1.0	1,443	0.3	2,706	0.5	4,226	0.8	512,338	508,112	99.2
2008-09	489,493	97.3	5,109	1.0	1,604	0.3	3,133	0.6	3,817	0.8	503,156	499,339	99.2
2009-10	490,783	97.1	4,740	0.9	1,852	0.4	3,662	0.7	4,499	0.9	505,536	501,037	99.1
2010-11	489,069	96.7	5,959	1.2	2,113	0.4	4,206	0.8	4,655	0.9	506,002	501,347	99.1
2011-12	492,952	96.6	5,512	1.1	2,184	0.4	4,958	1.0	4,580	0.9	510,186	505,606	99.1
2012-13	496,460	96.5	6,168	1.2	2,355	0.5	5,612	1.1	4,151	0.8	514,746	510,595	99.2
2013-14	493,432	95.8	8,700	1.7	2,251	0.4	5,628	1.1	5,072	1.0	515,083	510,011	99.0
2014-15	492,611	95.6	8,501	1.7	2,096	0.4	5,941	1.2	6,019	1.2	515,168	509,149	98.8
2015-16	495,792	95.4	8,746	1.7	1,996	0.4	6,737	1.3	6,325	1.2	519,596	513,172	98.8
2016-17	497,812	95.5	7,951	1.5	1,891	0.4	7,465	1.4	6,218	1.2	521,337	515,119	98.8
2017-18	497,864	95.6	6,439	1.2	1,852	0.4	8,740	1.7	6,134	1.2	521,029	514,895	98.8
2018-19	502,286	95.6	6,136	1.2	1,723	0.3	9,851	1.9	5,519	1.1	525,515	519,996	98.9

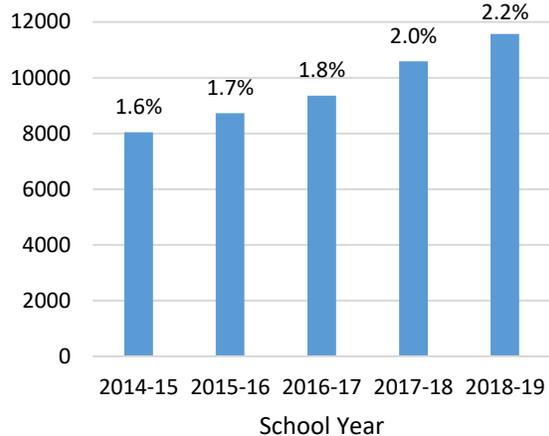
**Provisional Certificate of Immunization**

- During the 2018-2019 school year, 1.2% of students in kindergarten through 12<sup>th</sup> grade had a Provisional Certificate of Immunization, representing 6,136 students.
- The percent of students with a Provisional Certificate of Immunization has declined since the 2013-14 school year. A Tdap secondary school vaccine requirement went into effect during the 2013-14 school year, which resulted in an increase in the number of Provisional Certificates.
- Provisional Certificates of Immunization decreased from 1.7% (8,501 records) during the 2014-15 school year to 1.2% (6,136 records) during the 2018-19 school year (Table 3 and Figure 3).

### Certificate of Immunization Exemption

- During the 2018-2019 school year, 2.2% of students in kindergarten through 12<sup>th</sup> grade were reported to have a Certificate of Immunization Exemption, representing 11,574 students (Table 3).
- This percentage of exemptions is part of a five-year trend of year-over-year increase in exemption rates (Figure 4).
- Of the 11,574 exemptions, 85.1% (9,851 records) were categorized as religious and 14.9% (1,723 records) were categorized as medical (Figure 5).

**Figure 4 Number and Percentage of Exemptions, Kindergarten to 12th Grade, Iowa, 2014-15 to 2018-19**



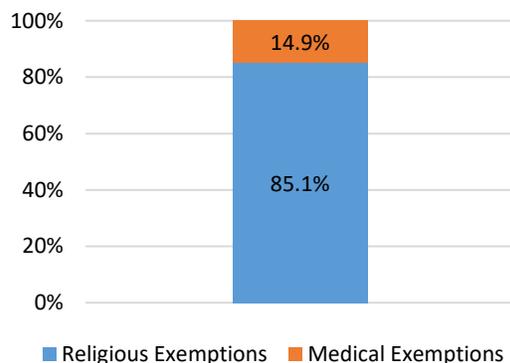
#### Medical Exemptions:

- During the 2018-2019 school year, 0.3% of students in kindergarten through 12<sup>th</sup> grade had a Certificate of Medical Exemption, representing 1,723 students and a slight decrease from the previous year.
- The percent of students in kindergarten through 12<sup>th</sup> grade with Certificates of Medical Exemption increased from 2000-01 to 2012-13, but has since been on the decline.

#### Religious Exemptions:

- During the 2018-2019 school year, 1.9% of students in kindergarten through 12<sup>th</sup> grade had a Certificate of Religious Exemption, representing 9,851 students and a 12.7% increase from the previous school year.
- The percent of students in kindergarten through 12<sup>th</sup> grade with Certificates of Religious Exemption has steadily increased each year.

**Figure 5 Percentage of Exemptions by Type, Kindergarten - 12th Grade, Iowa, 2018-19**



### Under and Un-Immunized

- During the 2018-2019 school year, 4.4% of students in kindergarten through 12<sup>th</sup> grade were under or un-immunized and includes children who have an invalid or no certificate, Provisional Certificate of Immunization, Certificate of Medical Exemption or Certificate of Religious Exemption, representing 23,229 records (Table 4).
- There was a 0.3% increase in the number of under and un-immunized students in 2018-2019 from the previous year. The number of under and un-immunized students has remained relatively consistent with a 3% increase since 2014-15 despite increases in the number of Certificates of Religious Exemption.
  - The number of Certificates of Religious Exemption increased 65.8% (3,910 records) since 2014-15 and increased 12.7% (1,111 records) from the previous year.
  - The number of Certificates of Medical Exemption decreased by 17.8% (373 records) since the 2014-15 school year, and by 7.0% (129 records) from the previous school year.

- The number of Provisional Certificates decreased 27.8% (2,365 records) since the 2014-15 school year, and by 4.7% (303 records) from the previous year.

**Table 4 Under-Immunized Students, Kindergarten - 12th Grade, Iowa, 2014-15 to 2018-19**

	2014-15	2015-16	2016-17	2017-18	2018-19
Certificate of Medical Exemption	2,096	1,996	1,891	1,852	1,723
Percent change in number of Medical Exemptions from previous year	-6.9%	-4.8%	-5.3%	-2.1%	-7.0%
Certificate of Religious Exemption	5,941	6,737	7,465	8,740	9,851
Percent change in number of Religious Exemptions from previous year	5.6%	13.4%	10.8%	17.1%	12.7%
Provisional Certificate	8,501	8,746	7,951	6,439	6,163
Percent change in number of Provisional Exemptions from previous year	-2.3%	2.9%	-9.1%	-19.0%	-4.7%
Invalid or No Certificate	6,019	6,325	6,218	6,134	5,519
Percent change in number of Invalid or No Certificate from previous year	18.7%	5.1%	-1.7%	-1.4%	-10.0%
Total Under-Immunized	22,557	23,804	23,525	23,165	23,229
Percent of Under-Immunized Students	4.4%	4.6%	4.5%	4.4%	4.4%
Percent change in number of Under-immunized from previous year	4.2%	5.5%	-1.2%	-1.5%	0.3%

### Individual Grades

Excluding homeschool students (which represent multiple grades), by grade (Table 5):

- Highest number and percentage of valid certificates: 5<sup>th</sup> grade
- Highest number and percentage of Certificates of Immunization: 5<sup>th</sup> grade
- Highest number and percentage of Provisional Certificate of Immunization: 12<sup>th</sup> grade
- Highest number and percentage of Certificates of Medical Exemption: 9<sup>th</sup> grade
- Highest number and percentage of Certificates of Religious Exemption: Kindergarten
- Highest number and percentage of invalid or no certificates: 12<sup>th</sup> grade
- Highest number and percentage of under or un-immunized students: 12<sup>th</sup> grade

**Table 5 State Immunization Summary by Grade, Kindergarten - 12th Grade, Iowa, 2018-19**

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%	Total	Total	%
HS	1,480	71.0	88	4.2	36	1.7	380	18.2	101	4.8	2,085	1,984	95.2
K	37,884	93.3	1,228	3.0	87	0.2	873	2.2	552	1.4	40,624	40,072	98.6
1	37,488	96.1	326	0.8	89	0.2	814	2.1	311	0.8	39,028	38,717	99.2
2	37,344	96.4	287	0.7	85	0.2	762	2.0	262	0.7	38,740	38,478	99.3
3	38,571	96.6	238	0.6	106	0.3	791	2.0	233	0.6	39,939	39,706	99.4
4	39,290	96.7	230	0.6	124	0.3	771	1.9	237	0.6	40,652	40,415	99.4
5	40,526	96.9	213	0.5	145	0.4	703	1.7	229	0.6	41,816	41,587	99.5
6	40,424	96.6	230	0.6	151	0.4	674	1.6	383	0.9	41,862	41,479	99.1
7	39,262	94.5	537	1.3	152	0.4	850	2.1	749	1.8	41,550	40,801	98.2
8	38,793	95.9	315	0.8	157	0.4	843	2.1	348	0.9	40,456	40,108	99.1
9	38,904	96.1	392	1.0	181	0.5	662	1.6	351	0.9	40,490	40,139	99.1
10	39,000	96.7	350	0.9	143	0.4	546	1.4	304	0.8	40,343	40,039	99.3
11	37,780	96.5	347	0.9	119	0.3	522	1.3	383	1.0	39,151	38,768	99.0
12	35,540	91.7	1,355	3.5	148	0.4	660	1.7	1,076	2.8	38,779	37,703	97.2
State K-12	502,286	95.6	6,136	1.2	1,723	0.3	9,851	1.9	5,519	1.1	525,515	519,996	98.9

Table Note: HS indicates Home School and K indicates Kindergarten

## Vaccination Coverage for Kindergarten Students

- During the 2018-19 school year, 98.6% of Iowa kindergarten students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law, representing (40,072 records).
- The statewide coverage level for all vaccinations required at school entry was 93.3%, as indicated by valid Certificates of Immunizations (37,884 records).
- Students without a Certificate of Immunization, Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate accounted for 1.4% of enrolled kindergarten students (552 records) (Figure 6 and Table 6).

**Figure 6 Immunization Certificates by Type, Kindergarten, Iowa, 2011-12 to 2018-19**

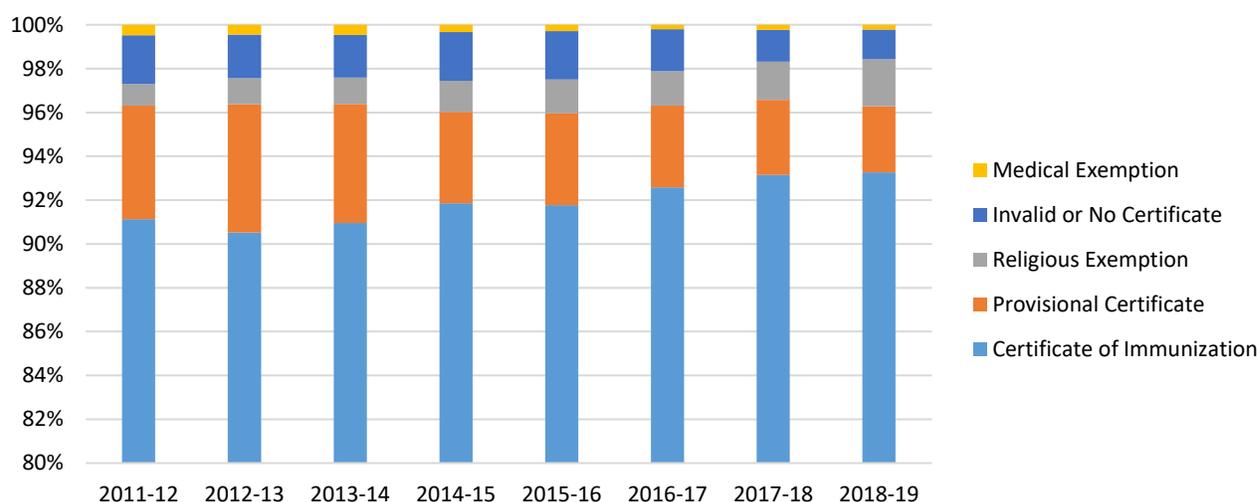


Figure Note: Vertical axis begins at 80%

**Table 6 State Immunization Summary by Year, Kindergarten, Iowa, 2011-12 to 2018-19**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical	Religious	Total	%	Total	%		Total	%
2011-12	36,500	91.1	2,076	5.2	193	0.5	398	1.0	886	2.2	40,053	39,167	97.8
2012-13	37,713	90.5	2,438	5.9	188	0.5	499	1.2	825	2.0	41,663	40,838	98.0
2013-14	37,587	91.0	2,246	5.4	193	0.5	498	1.2	801	1.9	41,325	40,524	98.1
2014-15	38,261	91.9	1,737	4.2	138	0.3	597	1.4	923	2.2	41,656	40,733	97.8
2015-16	37,824	91.8	1,730	4.2	119	0.3	635	1.5	907	2.2	41,215	40,308	97.8
2016-17	36,649	92.6	1,478	3.7	79	0.2	622	1.6	759	1.9	39,587	38,828	98.1
2017-18	36,917	93.2	1,356	3.4	93	0.2	694	1.8	572	1.4	39,632	39,060	98.6
2018-19	37,884	93.3	1,228	3.0	87	0.2	873	2.2	552	1.4	40,624	40,072	98.6

### Provisional Certificate of Immunization

- During the 2018-2019 school year, 3.0% of kindergarten students had a Provisional Certificate of Immunization, representing 1,228 students.
- The percentage of Provisional Certificates of Immunization is part of a seven-year trend of year-over-year decreases.
- Provisional certificates have decreased by 29.3% (509 records) since 2014-15.

### Certificate of Immunization Exemption

- During the 2018-2019 school year, 2.4% of kindergartners were reported to have an exemption, representing 960 students.
- Of the 960 exemptions, 873 (90.9%) were categorized as religious and 87 (9.1%) as medical (Figure 7).

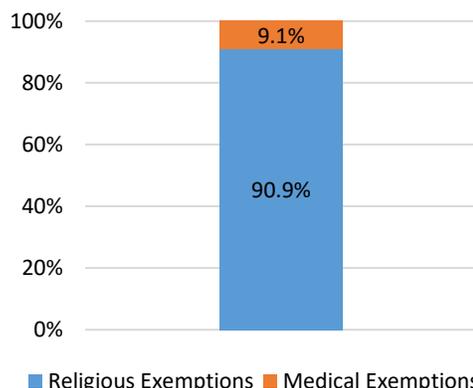
#### Medical Exemptions:

- During the 2018-2019 school year, 0.2% of kindergarten students were reported to have a Certificate of Medical Exemption, representing 87 students. (Table 6).

#### Religious Exemptions:

- During the 2018-2019 school year, 2.2% of kindergarten students were reported to have a Certificate of Religious Exemption, representing 873 students.

**Figure 7 Percentage of Exemptions by Type, Kindergarten, Iowa, 2018-19**



### Kindergarten Vaccination Coverage by School Type

- During the 2018-19 school year, kindergartners enrolled in public schools had a higher percentage of immunization certificates and lower percentage of invalid/no certificates, provisional certificates, and exemptions compared to their peers enrolled in private schools.
- The statewide coverage levels for all vaccinations required at school entry for kindergarten in private and public schools was 87.4% and 93.8%, respectively, as indicated by valid Certificates of Immunization.
- During the 2018-2019 school year, 5.2% of kindergarten students enrolled in private schools reported an exemption, compared to 2.1% enrolled in public schools (Table 7).

**Table 7 Kindergarten Vaccine Coverage and Exemptions by School Type, Iowa, 2018-19**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
Private	2765	87.4	98	3.1	12	0.4	153	4.8	134	4.2	3,162	3,028	95.8
Public	35119	93.8	1130	3.0	75	0.2	720	1.9	418	1.1	37,462	37,044	98.9
Total	37,884	93.3	1,228	3.0	87	0.2	873	2.2	552	1.4	40,624	40,072	98.6

### Under and Un-Immunized

- During the 2018-19 school year, 6.7% of kindergarten students were under or un-immunized and includes students with a Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate, representing 2,740 students (Table 8).
- The number of under/un-immunized students has steadily decreased since 2012-13 due to decreases in the number of Certificates of Medical Exemption, Provisional Certificates, and invalid or no certificates.
- The number of under/un-immunized students has decreased 19.3% since the 2014-15 school year and decreased 0.9% from the previous year.

- The number of Provisional Certificates decreased 29.3% (509 records) since the 2014-15 school year and decreased by 9.4% (128 records) from the previous year.
- The number of Certificates of Medical Exemption decreased by 37.0% (51 records) since the 2014-15 school year and by 6.5% (6 records) from the previous year.
- The number of Certificates of Religious Exemption has increased 46.2% (276 records) since the 2014-15 school year and 25.8% (179 records) from the previous year.

**Table 8 Under-Immunized Students, Kindergarten, Iowa, 2014-15 to 2018-19**

	2014-15	2015-16	2016-17	2017-18	2018-19
Certificate of Medical Exemption	138	119	79	93	87
Percent change in number of Certificate of Medical Exemption from previous year	-28.5%	-13.8%	-33.6%	17.7%	-6.5%
Certificate of Religious Exemption	597	635	622	694	873
Percent change in number of Certificate of Religious Exemption from previous year	19.9%	6.4%	-2.0%	11.6%	25.8%
Provisional Certificate	1,737	1,730	1,478	1,356	1,228
Percent change in number of Provisional Certificate from previous year	-22.7%	-0.4%	-14.6%	-8.3%	-9.4%
Invalid or No Certificate	923	907	759	572	552
Percent change in number of Invalid or No Certificate from previous year	15.2%	-1.7%	-16.3%	-24.6%	-3.5%
Total Under-Immunized	3,395	3,391	2,938	2,715	2,740
Percent of Under-Immunized Students	8.2%	8.2%	7.4%	6.9%	6.7%
Percent change in number of Under-Immunized from previous year	-9.2%	-0.1%	-13.4%	-7.6%	0.9%

## Vaccination Coverage for 7<sup>th</sup> Grade Students

Iowa currently has two additional immunization requirements for all students entering, advancing or transferring into 7<sup>th</sup> grade, which may impact vaccination coverage:

- Beginning with the 2013-2014 school year, all students entering, advancing or transferring into 7<sup>th</sup> grade require proof of an adolescent tetanus, diphtheria and pertussis (whooping cough) booster immunization (Tdap) for school enrollment. This dose must contain the pertussis component to be compliant with school entry requirements.
- Beginning with the 2017-2018 school year, all students entering, advancing or transferring into 7<sup>th</sup> grade and born after September 15, 2004, require proof of one dose of meningococcal conjugate vaccine (MenACWY).
- During the 2018-19 school year, 98.2% of Iowa 7<sup>th</sup> grade students had valid Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law.
- The statewide coverage levels for all vaccinations required upon entry into 7<sup>th</sup> grade was 94.5%, as indicated by valid Certificates of Immunization.
- Invalid or no immunization certificates accounted for 1.8% of enrolled 7<sup>th</sup> grade students (Figure 8 and Table 9).

**Figure 8 Immunization Certificates by Type, 7th Grade, Iowa, 2015-16 to 2018-19**

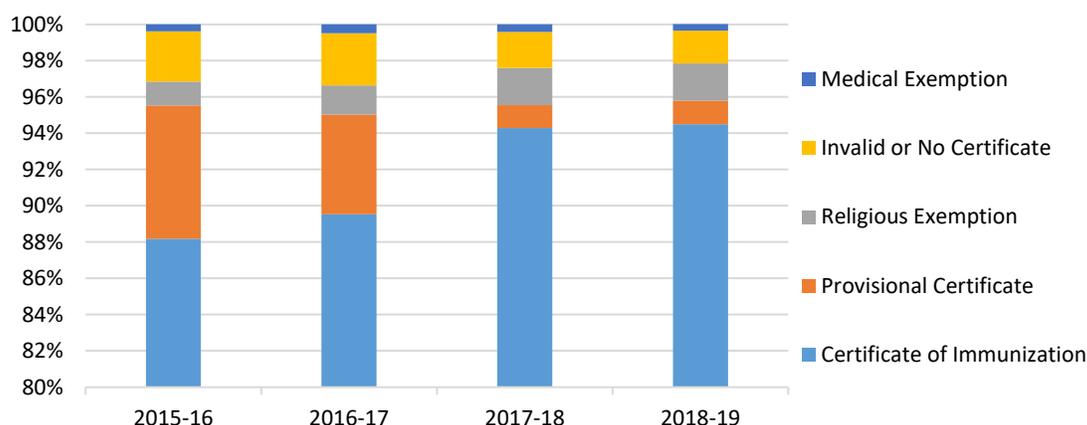


Figure Note: Vertical axis begins at 80%

**Table 9 Immunization Certificates by Type, 7th Grade, Iowa, 2015-16 to 2018-19**

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2015-16	34,251	88.2	2,857	7.4	145	0.4	511	1.3	1,079	2.8	38,843	37,764	97.2
2016-17	35,320	89.5	2,168	5.5	192	0.5	638	1.6	1,133	2.9	39,451	38,318	97.1
2017-18	37,760	94.3	502	1.3	166	0.4	820	2.1	796	2.0	40,044	39,248	98.0
2018-19	39,262	94.5	537	1.3	152	0.4	850	2.1	749	1.8	41,550	40,801	98.2

### Provisional Certificate of Immunization

- During the 2018-2019 school year, 1.3% of 7<sup>th</sup> grade students had a Provisional Certificate of Immunization, representing 537 students.
- The number of Provisional Certificates decreased from 7.4% (2,857 records) during the 2015-16 school year to 1.3% (537 records) during the 2018-19 school year.
- For the 2018-19 school year, the number of Provisional Certificates decreased by 81.2% since the 2015-16 school year, but increased by 7.0% from the previous year (Figure 8 and Table 9).

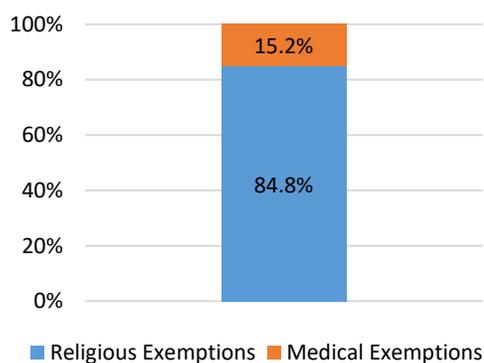
### Certificate of Immunization Exemption

- During the 2018-2019 school year, 2.4% of 7<sup>th</sup> grade students were reported to have an exemption, representing 1,002 students.
- Of the 1,002 exemptions, 850 (84.8%) were categorized as religious and 152 (15.2%) as medical (Figure 9).

#### Medical Exemptions:

- During the 2018-2019 school year, 0.4% of 7<sup>th</sup> grade students were reported to have a Certificate of Medical Exemption, representing 152 students (Table 9).

**Figure 9 Percentage of Exemptions by Type, 7th Grade, Iowa, 2018-19**



**Religious Exemptions:**

- During the 2018-2019 school year, 2.1% of 7<sup>th</sup> grade students were reported to have a Certificate of Religious Exemption, representing 850 students, which is consistent with the previous year.

**Under and Un-Immunized**

- During the 2018-19 school year, 5.5% of 7<sup>th</sup> grade students were under or un-immunized (2,288 records) including students with a Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate, which is a 3.8% increase from the previous school year (Table 10).
- The number of under or un-immunized students has decreased 50.2% since 2015-16, due to reductions in provisional certificates and invalid or no certificates.
  - The number of Certificates of Medical Exemption increased by 4.8% (7 records) since the 2015-16 school year, and decreased 8.4% (14 records) from the previous year.
  - The number of Certificates of Religious Exemption increased 66.3% (339 records) since 2015-16 and increased 3.7% (30 records) from the previous year.

**Table 10 Under-Immunized Students, 7th Grade, Iowa, 2015-16 to 2018-19**

	2015-16	2016-17	2017-18	2018-19
Certificate of Medical Exemption	145	192	166	152
Percent Change in Number of Certificates of Medical Exemption from previous year		32.4%	-13.5%	-8.4%
Certificate of Religious Exemption	511	638	820	850
Percent Change in Number of Certificates of Religious Exemption from previous year		24.9%	28.5%	3.7%
Provisional Certificate	2,857	2,168	502	537
Percent Change in Number of Provisional Certificates from previous year		-24.1%	-76.8%	7.0%
Invalid or No Certificate	1,079	1,133	796	749
Percent Change in Number of Invalid or No Certificates from previous year		5.0%	-29.7%	-5.9%
Total Under-Immunized	4,592	4,131	2,284	2,288
Percent of Under-Immunized Students	11.8%	10.5%	5.7%	5.5%
Percent Change in Number of Under-Immunized from previous year		-10.0%	-44.7%	3.8%

**Vaccination Coverage for 12<sup>th</sup> Grade Students**

Iowa has an additional vaccine requirement for students enrolling in 12<sup>th</sup> grade. Beginning with the 2017-2018 school year, all students entering, advancing or transferring into 12<sup>th</sup> grade and born after September 15, 1999, need proof of two doses of meningococcal (A, C W, Y) vaccine (one dose received on or after 16 years of age); or one dose if received when the student was 16 years of age or older. The meningococcal vaccine requirement has directly affected the immunization audits for 12<sup>th</sup> grade students.

- During the 2018-19 school year, 97.2% of Iowa 12<sup>th</sup> grade students had a Certificates of Immunization, Certificates of Immunization Exemption, or Provisional Certificates of Immunization and were compliant with Iowa law - the lowest of all school grades.

- The statewide coverage levels for all vaccinations required at 12<sup>th</sup> grade was 91.7%, as indicated by valid Certificates of Immunizations - the lowest of all school grades (Figure 10 and Table 11).
- Invalid or no immunization certificates accounted for 2.8% of enrolled 12<sup>th</sup> grade students, which is the highest percentage of all school grades (Table 5).

**Figure 10 Immunization Certificates by Type, 12th Grade, Iowa, 2015-16 to 2018-19**

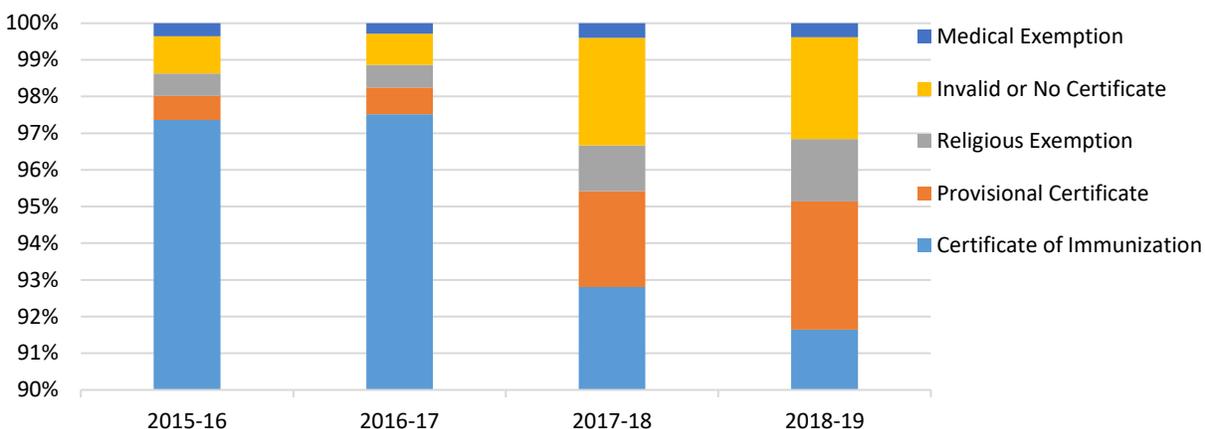


Figure Note: Vertical axis begins at 90%

**Table 11 State Immunization Summary, 12th Grade, Iowa, 2015-2016 to 2018-19**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2015-16	37,037	97.4	250	0.7	136	0.4	231	0.6	387	1.0	38,041	37,654	99.0
2016-17	37,814	97.5	282	0.7	110	0.3	239	0.6	330	0.9	38,775	38,445	99.2
2017-18	36,066	92.8	1,013	2.6	156	0.4	485	1.3	1,140	2.9	38,860	37,720	97.1
2018-19	35,540	91.7	1,355	3.5	148	0.4	660	1.7	1,076	2.8	38,779	37,703	97.2

### Provisional Certificate of Immunization

- During the 2018-2019 school year, 3.5% of 12<sup>th</sup> grade students had a Provisional Certificate of Immunization (1,355 records).
- Twelfth grade had the highest rate of provisional exemptions of all grades, and accounted for 22.1% of all Provisional Certificates issued in kindergarten through 12<sup>th</sup> grade.
- The number of Provisional Certificates increased from 0.7% (250 records) during the 2015-16 school year to 3.5% (1,355 records) during the 2018-19 school year.
- The number of Provisional Certificates in 12<sup>th</sup> grade students had the greatest increase in certificate type from the previous year (Figure 10 and Table 11).

### Certificate of Immunization Exemption

- During the 2017-2018 school year, 808 (2.1%) of 12<sup>th</sup> graders were reported to have an exemption.
- Of the 808 exemptions, 660 (81.7%) were categorized as religious and 148 (18.3%) as medical (Figure 11).

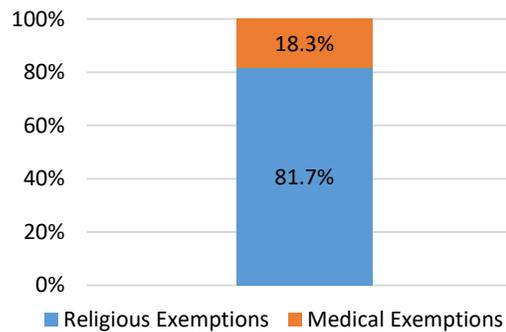
*Medical Exemptions:*

- During the 2018-2019 school year, 0.4% of 12<sup>th</sup> grade students were reported to have a Certificate of Medical Exemption, representing 148 students. (Table 11).

*Religious Exemptions:*

- During the 2018-2019 school year, 1.7% of 12<sup>th</sup> grade students were reported to have a Certificate of Religious Exemption, representing 660 students.

**Figure 11 Percentage of Exemptions by Type, 12<sup>th</sup> Grade, Iowa, 2018-19**



**Under and Un-Immunized**

- During the 2018-19 school year, 8.4% of 12<sup>th</sup> grade students were under or un-immunized (3,239 records). This includes students with a Provisional Certificate of Immunization, Certificate of Medical Exemption, Certificate of Religious Exemption, or an invalid or no certificate, and is a 15.9% increase from the previous school year (Table 12).
- The number of under or un-immunized students has increased 222.6% since 2015-16 due to increases in the number of Provisional Certificates, Invalid/No Certificates, Certificates of Medical Exemption, and Certificates of Religious Exemptions. The new meningococcal vaccine requirement has directly affected the immunization audits for 12<sup>th</sup> grade students.
- During the 2018-19 school year, there was a 15.9% increase in under and un-immunized students from the previous year (445 records), due to large increases in the number of students with Certificates of Religious Exemptions and Provisional Certificates.
  - There was a 36.1% increase in the number of Certificates of Religious Exemption from the previous year, which was an increase of 175 records.
  - There was a 33.8% increase in the number of Provisional Certificates from the previous year, which was an increase of 342 records.
  - There was a 5.6% decrease in the number of Invalid or No Certificates from the previous year, which was a decrease of 64 records.
  - There was a 5.1% decrease in the number of Certificates of Medical Exemption from the previous year, which was a decrease of eight records.

**Table 12 Under-Immunized Students, 12th Grade, Iowa, 2015-16 to 2018-19**

	2015-16	2016-17	2017-18	2018-19
Certificate of Medical Exemption	136	110	156	148
Percent change in number of Certificates of Medical Exemption from previous year		-19.1%	41.8%	-5.1%
Certificate of Religious Exemption	231	239	485	660
Percent change in number of Certificates of Religious Exemption from previous year		3.5%	102.9%	36.1%
Provisional Certificate	250	282	1,013	1,355
Percent change in number of Provisional Certificates from previous year		12.8%	259.2%	33.8%
Invalid or No Certificate	387	330	1,140	1,076
Percent change in number of Invalid or No Certificates from previous year		-14.7%	245.5%	-5.6%
Total Under-Immunized	1,004	961	2,794	3,239
Percent of Under-Immunized Students	2.6%	2.5%	7.2%	8.4%
Percent change in number of Under-Immunized from previous year		-4.3%	190.7%	15.9%

## Summary

State vaccination requirements for child care and school entry are important tools for maintaining high vaccination coverage rates and in turn, lower rates of vaccine-preventable diseases. While immunization rates in Iowa are consistent with or exceed national averages, pockets of under and un-immunized children leave themselves and their communities vulnerable to vaccine-preventable diseases. While the data in this report demonstrate trends, school audit data do not provide a full picture of all children's immunization history. Vaccination and exemption status reflects the child's status at the time of the audit. Some children may be in the process of receiving required vaccines and final vaccination or exemption status may change after completion of the audit (Provisional Certificates, Medical Exemptions and invalid records). In addition, some students with Religious Exemptions may have received some of the required vaccines.

All states allow for medical exemptions, five states do not allow religious exemptions (California, Louisiana, Minnesota, Mississippi, West Virginia), and three do not allow exemptions for religious or philosophic reasons (California, Mississippi and West Virginia). Iowa law allows for medical and religious exemptions. Iowa exemption rates are comparable to available national data, 2017-18 (Table 13).

**Table 13 Vaccine Coverage and Exemptions in Iowa and United States, 2017-18 and 2018-19**

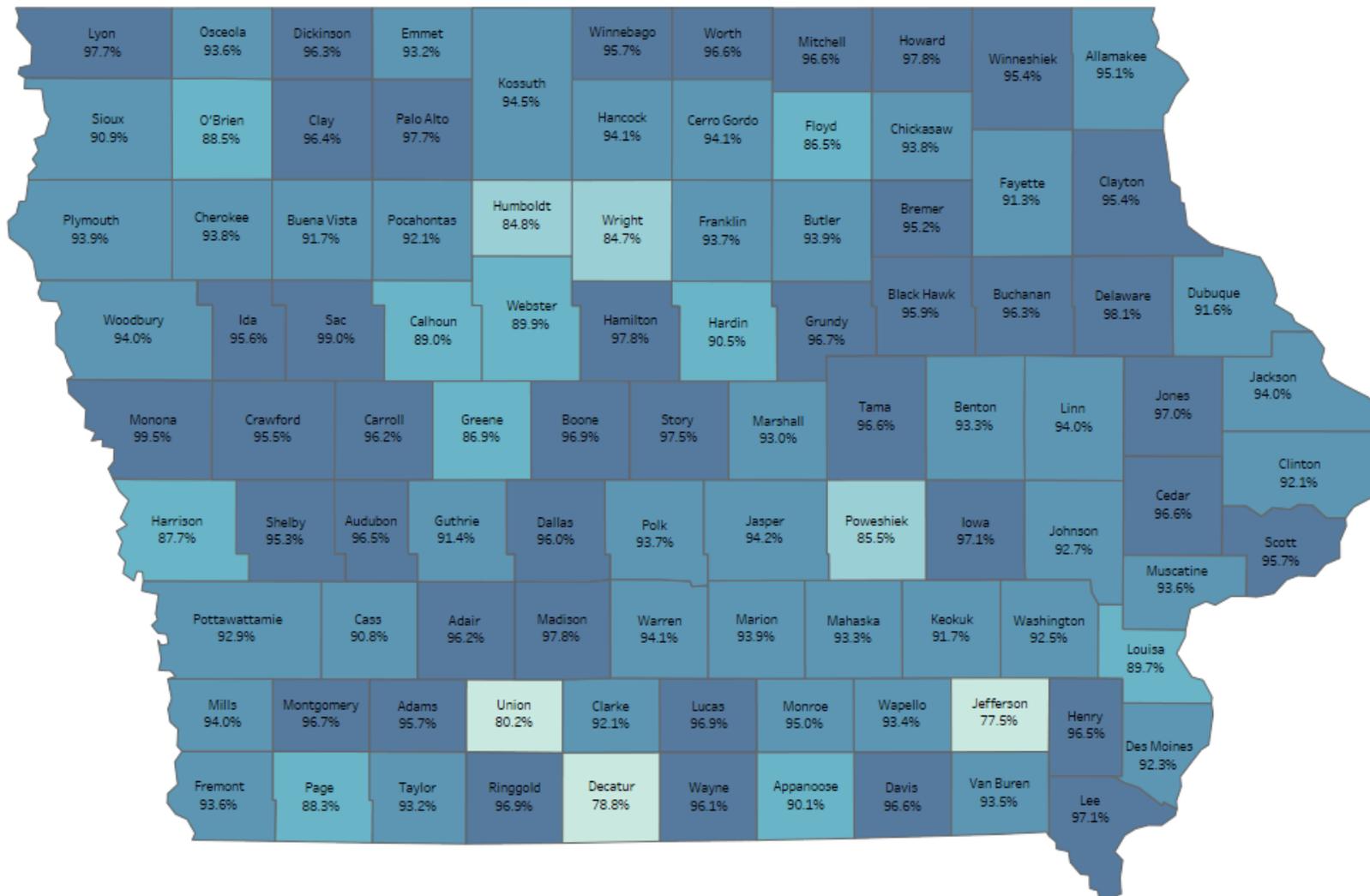
	Iowa Child Care	Iowa Kindergarten	Iowa Kindergarten - 12th grade	National 2017-2018 (Kindergarten only)
Percent Valid Certificates	96.8%	98.6%	98.9%	
Certificate of Immunization	93.9%	93.3%	95.6%	
Provisional Certificates	1.3%	3.0%	1.2%	
Certificate of Medical Exemption	0.1%	0.2%	0.3%	0.2% (Range <0.1 – 0.8%)
Certificate of Religious Exemption	1.5%	2.2%	1.9%	2.0% (Non-medical Exemptions Range <0.1 – 7.5%)
Invalid or No Certificate	3.2%	1.4%	1.1%	

Data Note: Source of national kindergarten data available at <https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/pubs-resources.html>.

Studies have found individuals claiming exemptions from immunization are at a greater risk of contracting vaccine-preventable diseases. States with lower immunization rates have higher rates of vaccine-preventable diseases. The IDPH Immunization Program continues to monitor immunization exemption rates, identify clusters of un-immunized children and provide education and information to address vaccine safety concerns. Vaccines prevent diseases and save lives. Immunize for a better life.

## Appendix A – Supplemental Maps

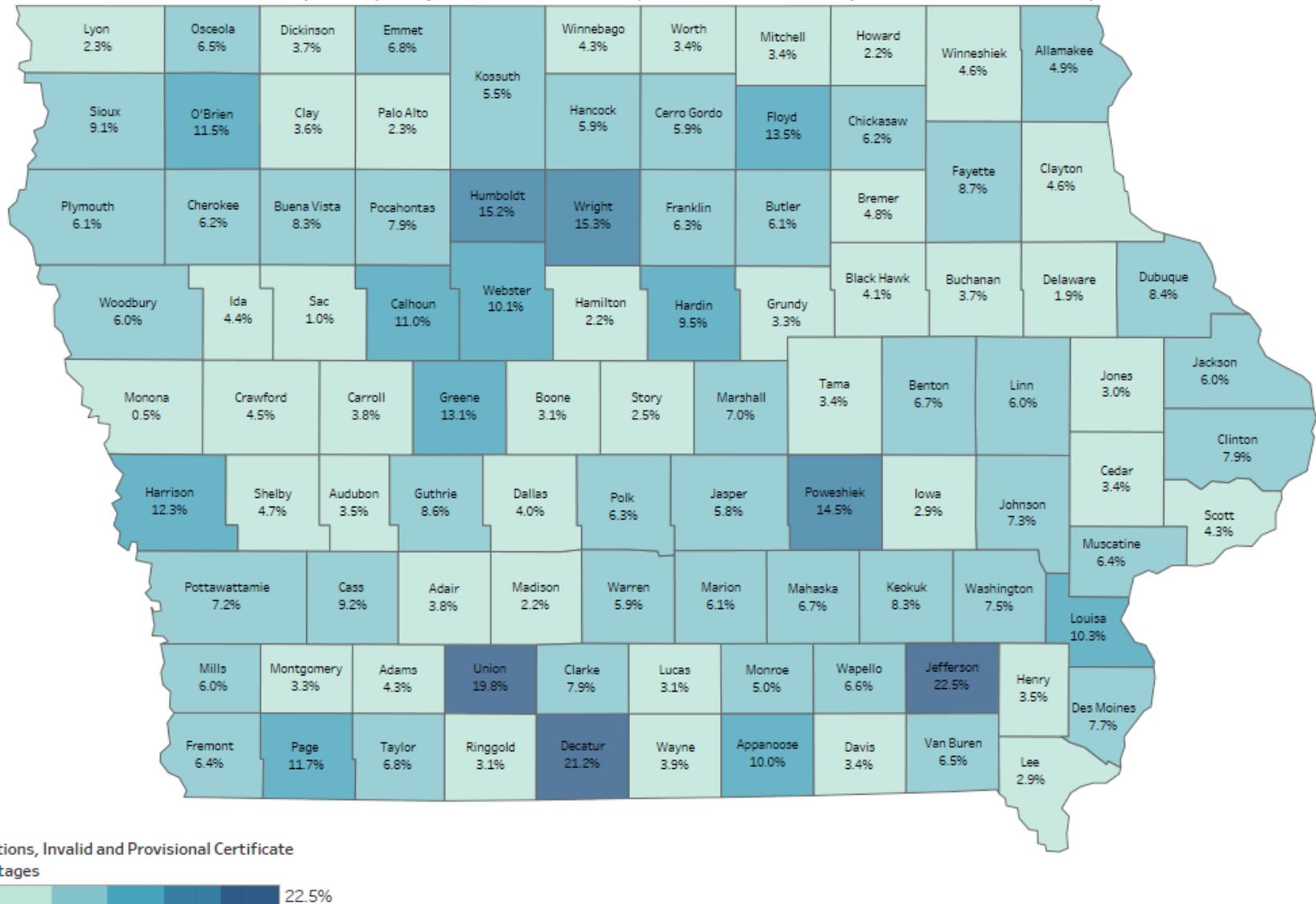
**Appendix 1. Percent of Child Care Attendees with a Certificate of Immunization by County, Iowa, 2018-2019 School Year**



Certificate of Immunization Percentages  
 77.5% 99.5%

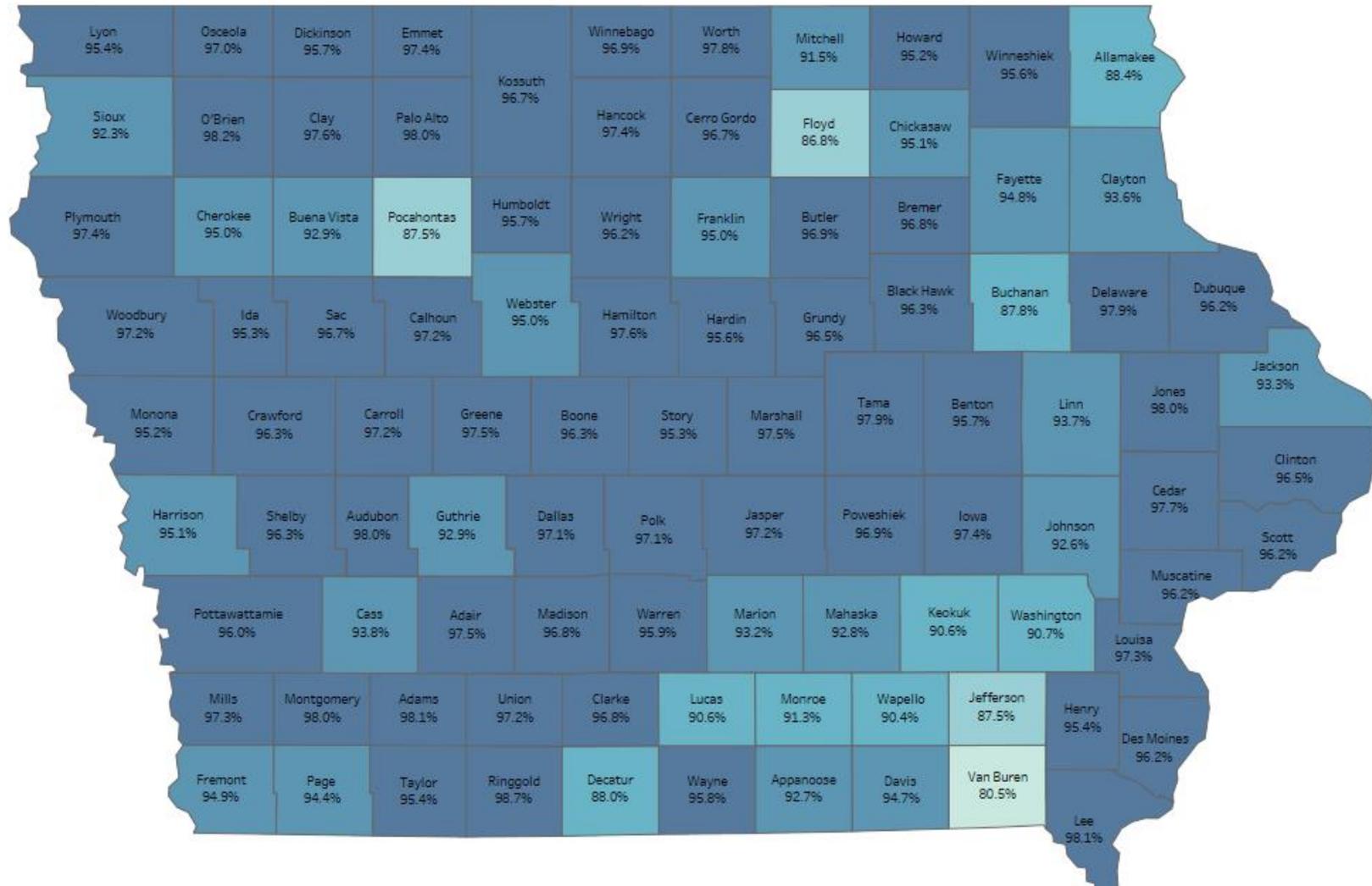
Iowa Department of Public Health, Immunization Program

**Appendix 2. Percent of Child Care Attendees who are Under or Un-immunized by County, Iowa, 2018-2019 School Year**  
*Attendees with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



Iowa Department of Public Health, Immunization Program

**Appendix 3. Percent of Students Kindergarten through 12th Grade with a Certificate of Immunization by County, Iowa, 2018-2019 School Year**

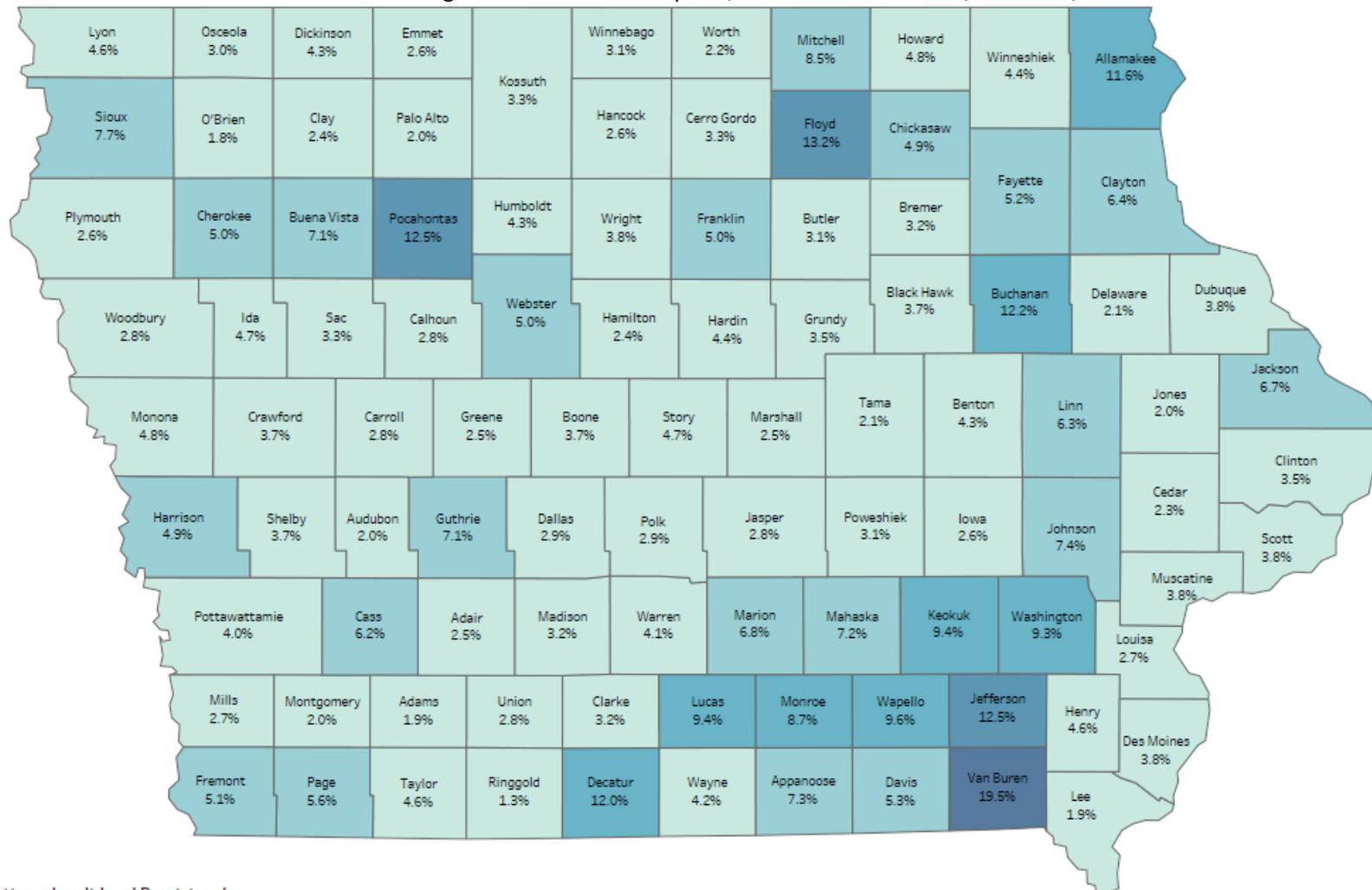


Certificate of Immunization Percentages  
 80.5% 98.7%

Iowa Department of Public Health, Immunization Program

**Appendix 4. Percent of Students Kindergarten through 12th Grade who are Under or Un-immunized by County, Iowa, 2018-2019 School Year**

Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate

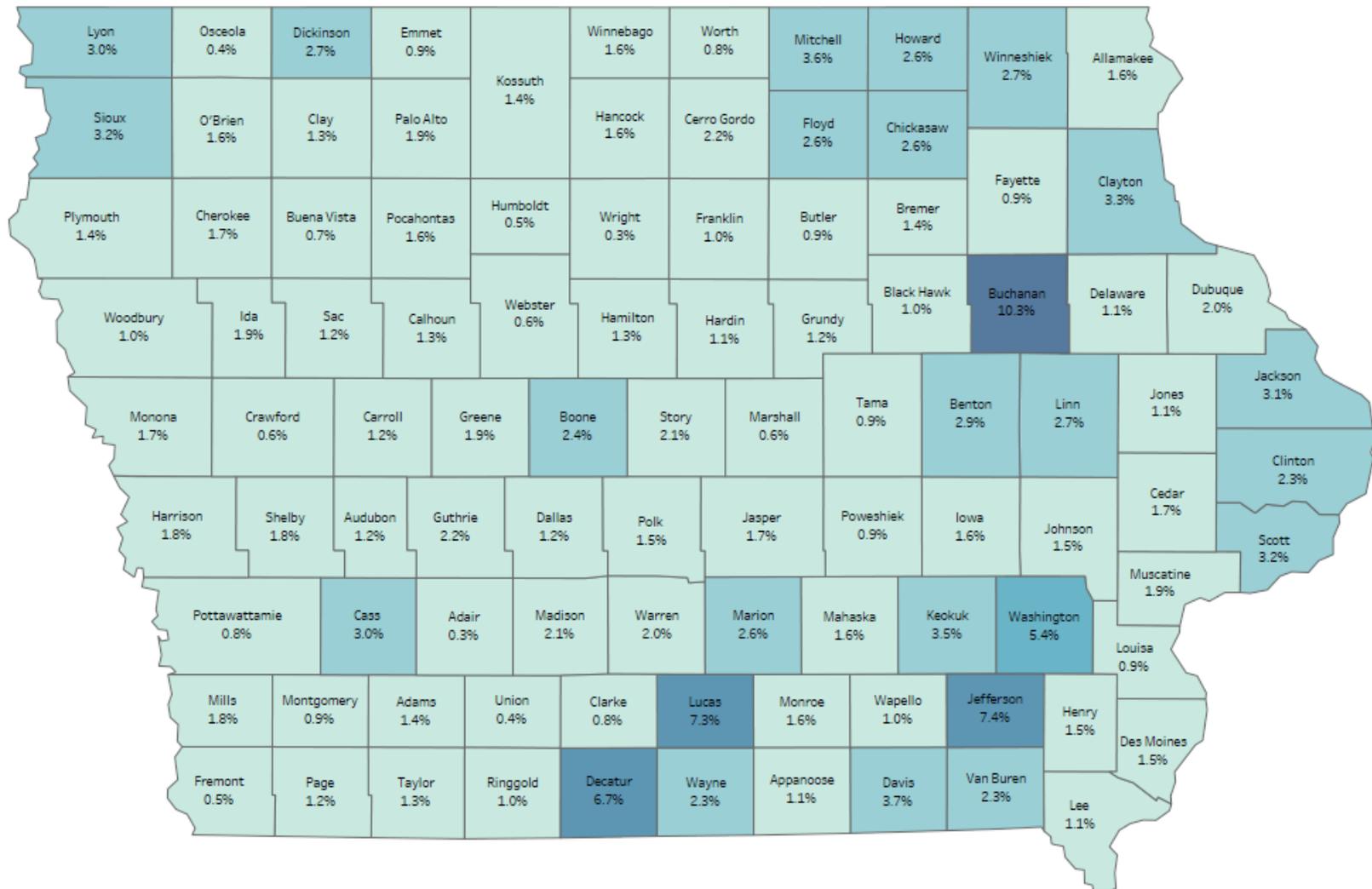


Exemptions, Invalid and Provisional Certificate Percentages



Iowa Department of Public Health, Immunization Program

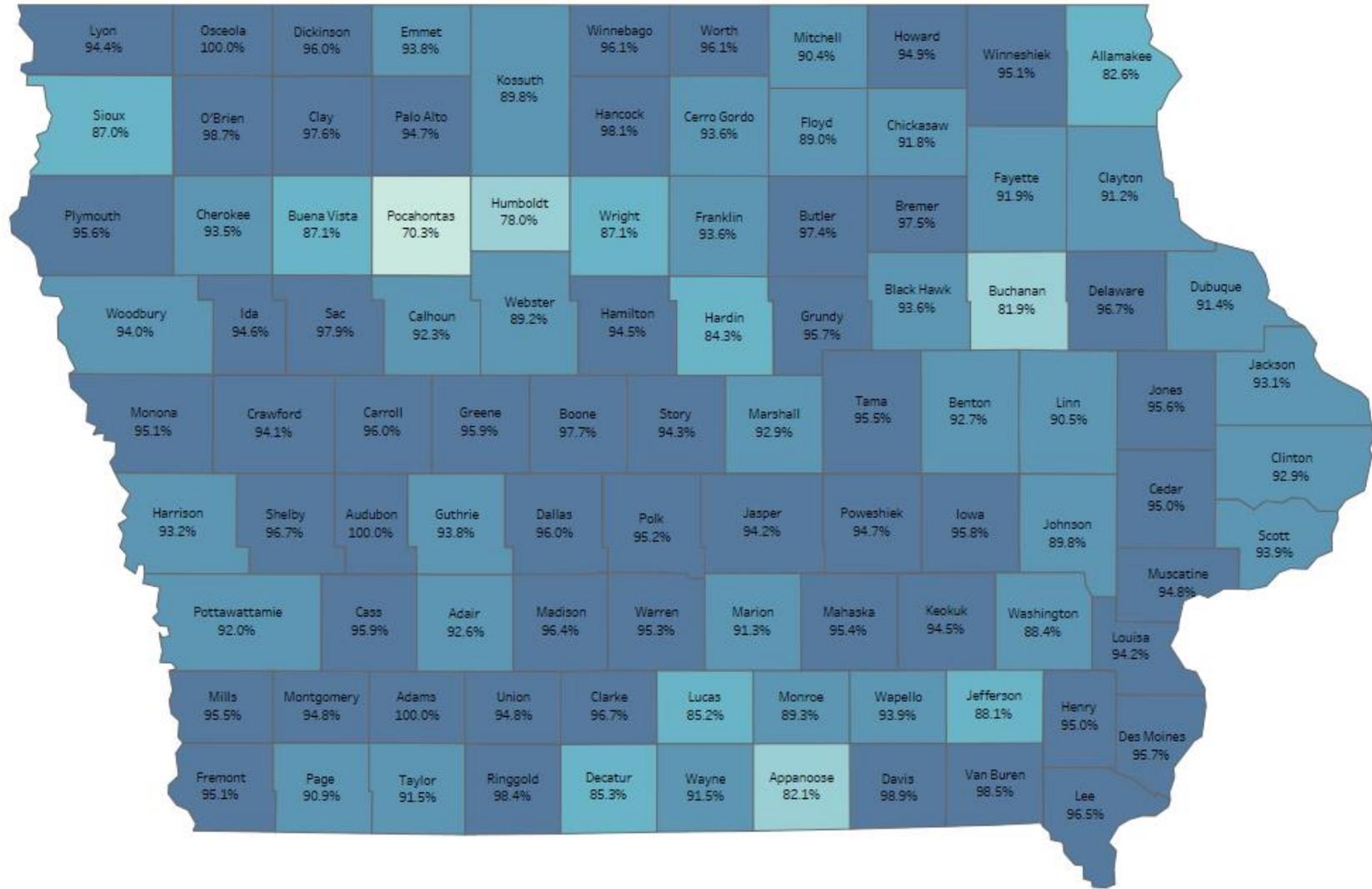
**Appendix 5. Percent of Students Kindergarten through 12th Grade with a Religious Exemption, Iowa, 2018-2019 School Year**



Certificate of Religious Exemption Percentages  
 0.3% 10.3%

Iowa Department of Public Health, Immunization Program

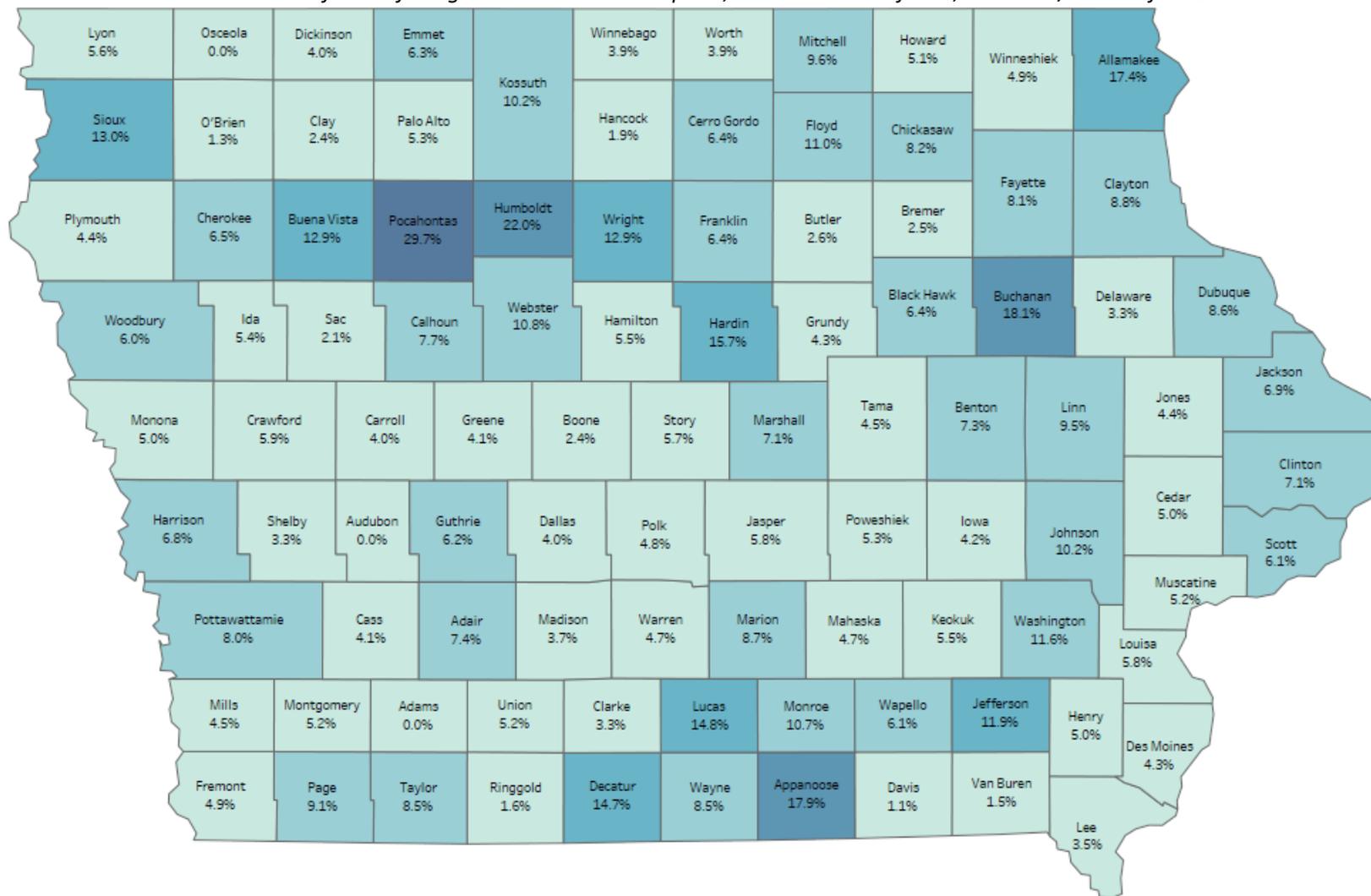
**Appendix 6. Percent of Kindergarten Students with a Certificate of Immunization by County, Iowa, 2018-2019 School Year**



Certificate of Immunization Percentages  
 70.3% 100.0%

Iowa Department of Public Health, Immunization Program

**Appendix 7. Percent of Kindergarten Students who are Under or Un-immunized by County, Iowa, 2018-2019 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*

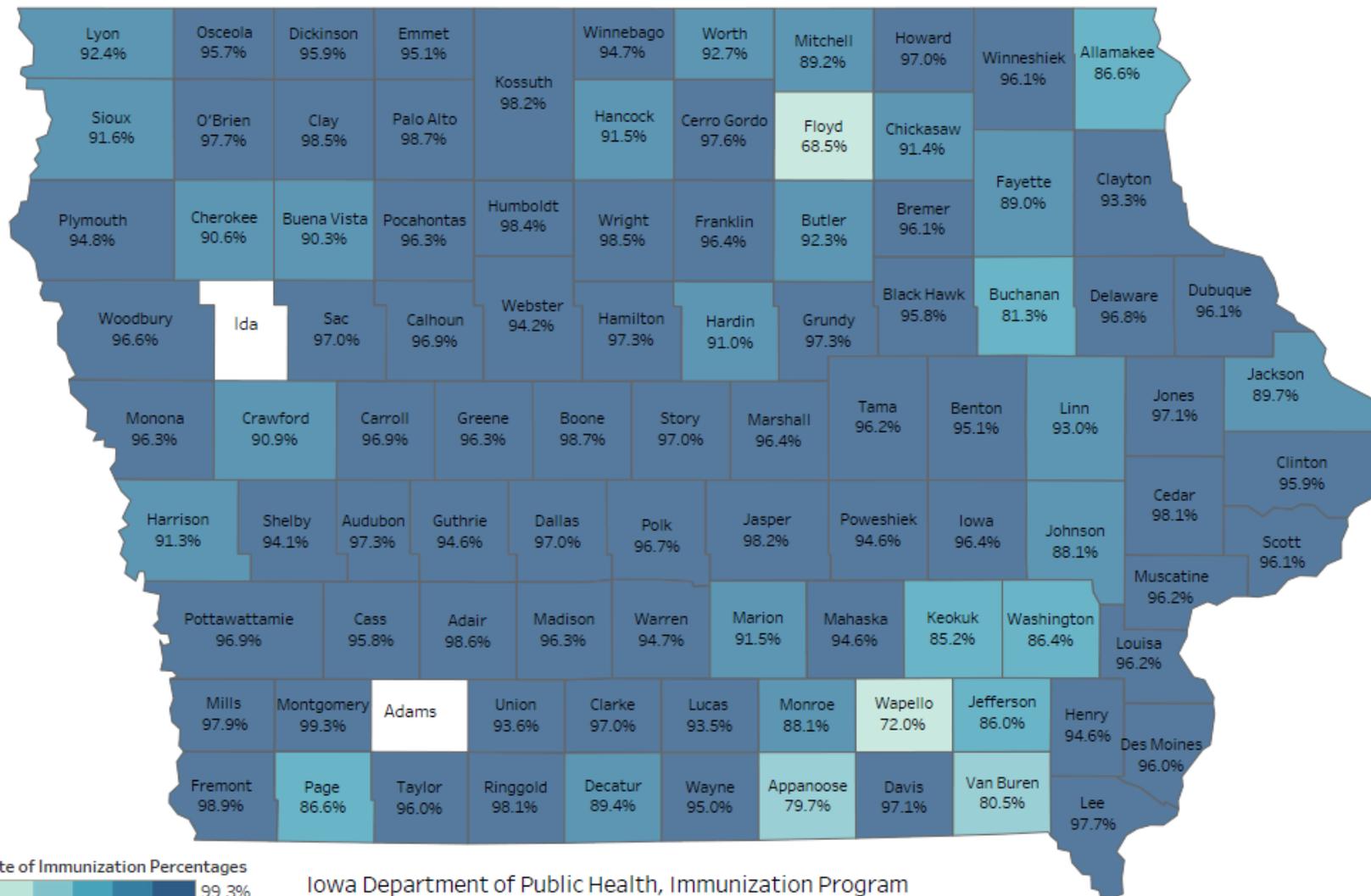


Exemptions, Invalid, and Provisional Certificate Percentages



Iowa Department of Public Health, Immunization Program

**Appendix 8. Percent of Seventh Grade Students with a Certificate of Immunization by County, Iowa, 2018-2019 School Year**

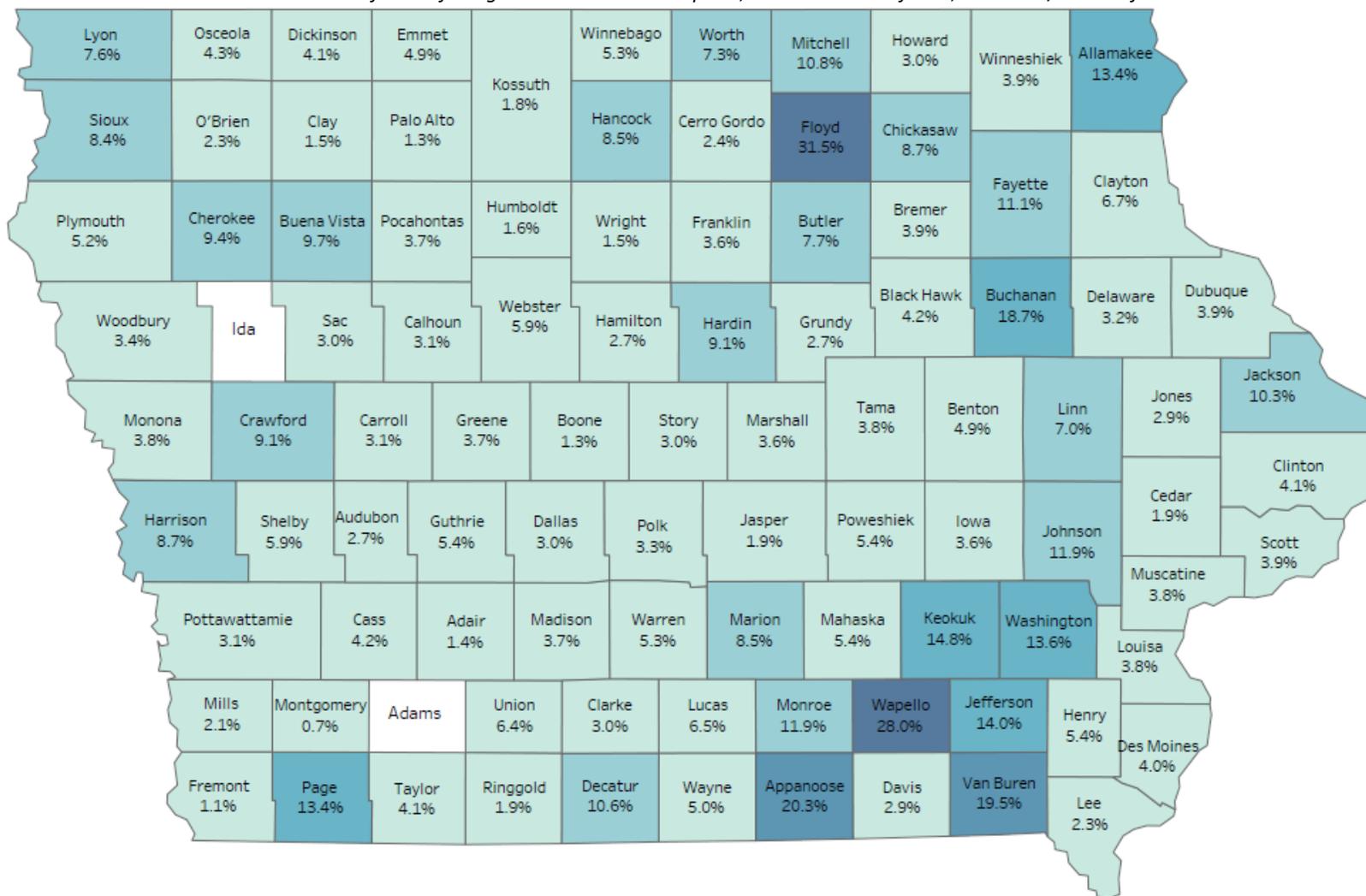


Certificate of Immunization Percentages  
68.5% 99.3%

Iowa Department of Public Health, Immunization Program

Map Note: Data are collected by location of school, not county of resident of student. Ida and Adams counties do not include 7th grade students.

**Appendix 9. Percent of Seventh Grade Students who are Under or Un-immunized by County, Iowa, 2018-2019 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



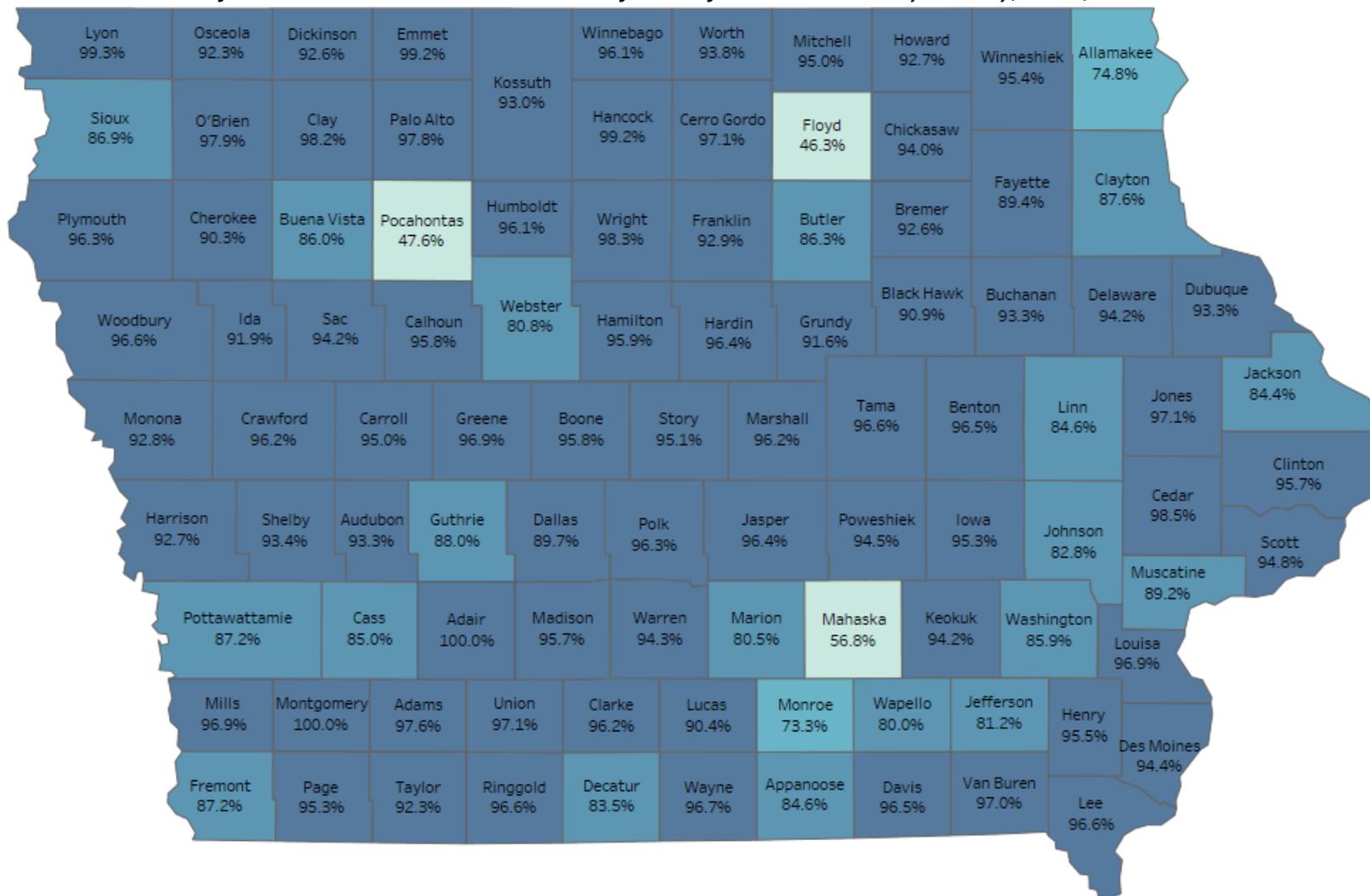
Exemptions, Invalid, and Provisional Certificate Percentages



Iowa Department of Public Health, Immunization Program

Map Note: Data are collected by location of school, not county of resident of student. Ida and Adams counties do not include 7th grade students.

**Appendix 10. Percent of 12th Grade Students with a Certificate of Immunization by County, Iowa, 2018-2019 School Year**



Certificate of Immunization Percentage  
46.3% 100.0%

Iowa Department of Public Health, Immunization Program

**Appendix 11. Percent of 12th Grade Students who are Under or Un-immunized by County, Iowa, 2018-2019 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*

